UIS to DDIF Converter Installation and User's Guide

Order Number: AA-MI66A-TE

This manual explains how to install and use the UIS to DDIF Converter.

Operating System and Version:	This manual contains information for VMS Version 5.1 or later.
Software Version:	VMS Workstation Software Version 4.2.
Software Version:	UIS to DDIF Converter Version 1.0

September 1989

The information in this document is subject to change without notice and should not be construed as a commitment by Digital Equipment Corporation. Digital Equipment Corporation assumes no responsibility for any errors that may appear in this document.

The software described in this document is furnished under a license and may be used or copied only in accordance with the terms of such license.

No responsibility is assumed for the use or reliability of software on equipment that is not supplied by Digital Equipment Corporation or its affiliated companies.

Copyright ©1989 by Digital Equipment Corporation

All Rights Reserved.

The postpaid READER'S COMMENTS form on the last page of this document requests the user's critical evaluation to assist in preparing future documentation.

The following are trademarks of Digital Equipment Corporation:

DDIF	IAS	VAX C
DEC	MASSBUS	VAXcluster
DEC/CMS	PDP	VAXstation
DEC/MMS	PDT	VMS
DECnet	RSTS	VR150/160
DECUS	RSX	VT
DECwindows	ULTRIX	
DECwrite	UNIBUS	digital™
DIBOL	VAX	

This document was prepared using VAX DOCUMENT, Version 1.2

Contents

PREFACE v

CHAPTER 1 INSTALLING THE UIS TO DDIF CONVERTER 1–1

1.1 PRE-INSTALLATION 1–1
1.1.1 The Distribution Kit 1–1
1.1.2 Prerequisite Software 1–2
1.1.3 Optional Software 1–2
1.1.4 Installation Procedure Requirements 1–2
1.1.5 Special Requirements 1–2

1.2 INSTALLATION PROCEDURE 1–3
1.2.1 Preliminary Steps 1–3
1.2.2 Installation Steps 1–3

1.3 IVP (INSTALLATION VERIFICATION PROCEDURE) 1–5
1.3.1 Installation Error Messages 1–6

CHAPTER 2 USING THE UIS TO DDIF CONVERTER 2–1

2.1 USING THE UIS TO DDIF CONVERTER 2–1
2.1.1 Converting a UIS Input File on VMS Systems 2–1

2.2 OVERVIEW OF UIS 2–2

2.3 DATA MAPPING 2–2

CHAPTER 3 PROBLEMS AND RESTRICTIONS 3–1

3.1 DATA LOSS 3–1
3.1.1 Perceived Data Loss 3–1

3.1.2 Real Data Loss 3-2
3.1.3 Differences and Inconsistencies 3-2
3.1.4 User-Defined UIS Fonts 3-2
3.1.5 Application Restrictions 3-2

APPENDIX A SOFTWARE AND ERROR MESSAGES A-1

A.1 MESSAGES RETURNED AS A RESULT OF THE CONVERSION A-1

A.2 MESSAGES RETURNED AS A RESULT OF ERRORS ENCOUNTERED DURING THE READING OF A .UIS FILE A-1

A.3 ERROR MESSAGES RETURNED FROM OTHER FACILITIES A-3

APPENDIX B OUTPUT FILES PRODUCED BY RUNNING THE IVP B-1

APPENDIX C TERMINAL SESSION—INSTALLING THE UIS TO DDIF CONVERTER C-1

FIGURES

B-1 Ellipses (ELLIPSES.UIS) B-2
B-2 More Ellipses (MORE_ELLIPSES.UIS) B-3
B-3 Three Circles (THREECIRCLES.UIS) B-4
B-4 Book Graph (BOOK_GRAPH.UIS) B-5
B-5 Book Line Width (BOOK_LINE_WIDTH.UIS) B-6
B-6 Pattern (PATTERN.UIS) B-7
B-7 SIGHT 2 (SIGHT2.UIS) B-8
B-8 SIGHT (SIGHT.UIS) B-9

TABLES

1-1 Directories and Files for UISCNV Installation 1-2

Preface

This document provides information about how to install and use the UIS to DDIF converter.

Intended Audience

This manual is for graphics programmers and users who want to convert graphics files from the UIS internal format to the DDIF format.

Document Structure

Using the UIS to DDIF Converter is arranged in three chapters and one appendix that cover the following topics:

- Chapter 1—Installing the UIS to DDIF Converter
- Chapter 2—Using the UIS to DDIF Converter
- Chapter 3—Problems and Restrictions
- Appendix A—Listing of the source file for the UIS to DDIF converter.
- Appendix B—Output from the PostScript™[1] files produced by running the IVP

Associated Documents

The following manuals are related to this document:

- *VMS Workstation Graphics Programming Guide*
- *VMS Workstation Guide to Printing Graphics*
- *VMS Workstation Software SIGHT User's Guide*

Conventions

Unless otherwise noted, the following conventions are used in this manual to display examples and the requirements of user input to the system.

Convention	Meaning
RETURN	This symbol indicates that you press the key marked RETURN.

[1] PostScript is a trademark of Adobe Systems, Inc.

Convention	Meaning
CTRL/X	This symbol indicates that you must press the key labeled CTRL while you simultaneously press another key, for example, CTRL/C, CTRL/Y, CTRL/I.
Ellipsis . . .	Vertical series of periods, or ellipsis, mean either that not all the data that the system would display in response to the particular command is shown or that not all the data a user would enter is shown.
file-spec, . . .	Horizontal ellipsis indicates that additional parameters, values, or information can be entered.
[Square brackets]	Square brackets indicate that the enclosed item is optional. (Square brackets are not, however, optional in the syntax of a directory name in a file specification or in the syntax of a substring specification in an assignment statement.)
Quotation marks	The term *quotation marks* refers to double quotation marks ("). The term *apostrophe* refers to a single quotation mark (').
Italics	Italicized words indicate that you should supply a value.

Licensing

The UIS to DDIF Converter does not require a license.

1 Installing the UIS to DDIF Converter

This chapter describes how to install the VMS UIS to DDIF Converter (UISCNV), the "Converter," on the VAX/VMS operating system. This chapter is intended for system managers or anyone who might be installing the Converter.

Keep this document with your distribution kit. You might have to refer to it in the future if you have any questions or need to reinstall the Converter.

The installation procedure is described step by step. The dialog is interactive. The system prompts you to answer questions and waits for you to tell it to continue.

This chapter does not contain release notes, which are provided on-line. You can display and/or print the release notes from within the installation procedure.

To read the release notes after installation, type or print the following file:

```
SYS$HELP:UISCNV010.RELEASE_NOTES
```

1.1 Pre-Installation

This section describes how to prepare for the installation of the Converter V1.0 software on your VAX/VMS system.

NOTE: The UIS to DDIF Converter is supported only on VMS. Neither VWS nor UIS files are supported on ULTRIX; therefore, the Converter is supported only on VMS.

1.1.1 The Distribution Kit

The Converter can be supplied on either TK50 tape cartridges or magnetic tape media.

The installation procedure prompts you to mount the volumes. Refer to the *Guide to VAX/VMS Software Installation* for your particular system for instructions on how to mount the distribution medium and on installation options.

Each distribution kit includes all files necessary to install and execute the Converter.

The kit contains two savesets:

- UISCNV010.A
- UISCNV010.B

1.1.2 Prerequisite Software

To run the Converter Version 1.0, you must fulfill the following prerequisites:

- Be running VAX/VMS Version 5.1.
- Have DECwindows Version 5.1 installed on your system.

1.1.3 Optional Software

This product offering has no optional software associated with it.

1.1.4 Installation Procedure Requirements

Before you can install the Converter, you must have the following:

- A UISCNV distribution kit.
- Access to a privileged system manager account.
- A minimum of 1,000 free blocks during installation.
- A minimum of 800 free blocks after installation.

1.1.5 Special Requirements

The UISCNV kit requires permanent disk space in the following directories:

SYS$SYSROOT:[SYSLIB]
SYS$SYSROOT:[SYSMSG]
SYS$SYSROOT:[SYSHLP.EXAMPLES] (a [.UISCNV] directory is created)

Table 1 shows the files in these directories.

Table 1–1 Directories and Files for UISCNV Installation

SYS$SYSROOT:			
[SYSLIB]	**[SYSMSG]**	**[SYSHLP.EXAMPLES]**	**[SYSHLP.EXAMPLES.UISCNV]**
DDIF$READ_UIS.EXE	UISCNVMSG.EXE	UISCNV.DIR	UISCNV$IVP.COM BOOK_GRAPH.UIS BOOK_LINE_WIDTH.UIS PATTERN.UIS SIGHT1.UIS SIGHT2.UIS THREECIRCLES.UIS ELLIPSES.UIS MORE_ELLIPSES.UIS IMAGE.UIS

Use the following command to determine if you have enough free disk space on your system disk to install the Converter:

```
$ SHOW DEVICE SYS$SYSDEVICE
```

You need at least 1,000 free blocks to install the Converter.

1.2 Installation Procedure

This section contains steps you follow to install the Converter. You must log in to the System Manager account and make a backup copy of the system disk.

1.2.1 Preliminary Steps

Follow these preliminary steps:

1. Make sure that all users have logged out of the system and that all batch jobs are complete.
2. Shut down the DECnet network.

The installation procedure prompts you to enter information. Most queries require a simple YES or NO answer. Respond with Y or N as appropriate, or press Return to accept the default.

The installation procedure should take between 15 and 20 minutes to complete, depending on your particular VAX configuration, system load, and whether or not you choose to run the Installation Verification procedure (IVP).

1.2.2 Installation Steps

Follow these steps to install the Converter:

1. Log in to the System Manager account. Set the default directory to SYS$UPDATE, by entering the following command:

   ```
   $ SET DEFAULT SYS$UPDATE
   ```

2. Invoke VMSINSTAL as follows:

   - If you are installing from a tape cartridge, enter the following command to invoke the VMSINSTAL command procedure:

     ```
     $ @SYS$UPDATE:VMSINSTAL UISCNV010 ddcu:
     ```

     where:

     ddcu: = tape unit name

   - If you are installing from a diskette, locate the floppy labeled:

     ```
     VMS/WS DECWM V1.0 BIN RX33 1/1
     ```

     Enter the following command to invoke the VMSINSTAL command procedure:

     ```
     $ @SYS$UPDATE:VMSINSTAL UISCNV010 ddcu:
     ```

where:

ddcu: = disk unit name

CAUTION: This kit will not install if you are running anything other than VMS Version 5.1.

The installation procedure displays information similar to the following announcement:

```
VAX/VMS Software Product Installation Procedure V5.1

It is 26-JUN-1989 at 12:15.

* Are you satisfied with the backup of your system disk [YES]?

Enter a question mark (?) at any prompt to get on-line help.

If you have not made a backup of your system disk, enter N and
Return to continue the installation procedure.
```

VMSINSTAL checks to see if DECnet is running and if users are logged in to the system. If these conditions exist, a warning message displays. You can stop the installation procedure by pressing Return when you are prompted to continue the installation procedure.

3 Mount the first installation kit volume when the system displays a message similar to the following:

```
* Please mount the first volume of the set on [device].

* Are you ready?
```

After you mount the first volume, enter Y and press Return to continue the installation procedure. The system displays the following messages:

```
%MOUNT-I-MOUNTED, VWS042 mounted on [device]:

The following products will be processed:

    UISCNV V1.0

Beginning installation of UISCNV V1.0 at 13:29.

%VMSINSTAL-I-RESTORE, Restoring product saveset A...
%VMSINSTAL-I-RELMOVED, The product's release notes have been
     successfully moved to SYS$HLP.
```

4 VMSINSTAL then displays the following message:

```
Installing the UIS to DDIF Converter Software V1.0

**********************************************

                VAX UISCNV V1.0

              UIS to DDIF Converter

             Installation  Procedure

Copyright © 1989, Digital Equipment Corporation

**********************************************

    The UIS to DDIF Converter consists of an
    executable image, two message files,  an
    IVP, and several .UIS files.  The entire
    kit will  be  installed.  The .UIS files
    converted  using  the  IVP will serve as
    example files.

  * Do you want to purge files replaced by this
    installation  [YES]?
```

Press Return or Y to purge the old version of the Converter from your system. Press N to retain the old version of the Converter.

5 The next prompt asks if you want to run the IVP after the installation:

```
* Do you want to run the IVP after the installation [YES]?
```

If you choose not to run the IVP, the following message displays:

```
You have not chosen to run the IVP, but the procedure
has been placed in SYS$SYSROOT:[SYSHLP.EXAMPLES.UISCNV]
along with several .UIS files to be converted.
```

At this point, no more questions will be asked. VMSINSTAL notifies you of this with the following message:

```
*** No more questions will be asked during the installation. ***
```

6 If your system disk does not have enough space, the installation fails and the system notifies you of the problem. You must install the Converter on the system disk.

7 The installation procedure copies files from the distribution kit and performs the installation. The following messages display:

```
%VMSINSTAL-I-RESTORE, Restoring product saveset B...
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target
    directories.
```

8 If you chose to run the IVP, it runs at this point. The IVP guarantees that the installation was successful. the installation procedure then displays the following message:

```
Installation of UISCNV V1.0 completed at 15:59.
```

9 If you chose to run the IVP and it did not complete successfully, a failure message will display.

1.3 IVP (Installation Verification Procedure)

The UIS to DDIF Converter kit includes an IVP (installation verification procedure) that runs automatically when you install the converter.

You can execute the IVP from a privileged or nonprivileged account any time after the converter has been successfully installed on your system. To execute the IVP, enter the following command:

```
$ @SYS$SYSROOT:[SYSHLP.EXAMPLES.UISCNV]UISCNV$IVP
```

The following message displays on your workstation screen:

```
*********************************************
              VAX UISCNV V1.0
           UIS to DDIF Converter
      Installation Verification Procedure
Copyright © 1989, Digital Equipment Corporation
*********************************************
```

```
The UIS to DDIF Converter IVP converts several
.UIS files into .ANL and .PS files.  For more
information on this conversion and the  output
produced,  refer  to  the DCL CONVERT/DOCUMENT
command.  You  will  be  notified as each .UIS
file has been successfully converted.
```

If the IVP fails, a message displays to indicate the reason for the failure. See Section 1.3.1 for an explanation of this message.

The files converted during this IVP are located in SYS$SYSROOT:[SYSHLP.EXAMPLES.UISCNV]. Each .UIS file represents one or many UIS generic encoding types.

- The files SIGHT1.UIS and SIGHT2.UIS were created by using SIGHT.
- All other .UIS files were created by using the UIS interface of VWS.

For each .UIS file, the IVP produces a .DDIF file, an .ANL file, and a .PS file. These files are placed in your current default directory. To view the converted DDIF information, TYPE the .ANL file. For a hard copy of the file, PRINT the .PS file on any PostScript printer.

NOTE: **Appendix B contains pictures of the .UIS files converted during the IVP.**

1.3.1 Installation Error Messages

This section describes errors that can occur during installation.

Operating System Failure

If the power goes off during the installation procedure or the operating system fails for any other reason, you must restart the system and begin the installation procedure again.

The following errors can occur during the installation procedure:

%UISCNV-E-BADVMS, UISCNV V1.0 requires VMS version V5.1.

Facility: UISCNV—UIS to DDIF Converter

Severity: Error

Explanation: Your VAX system must be running VMS V5.1 to install the Converter. The installation procedure detected that an earlier version of VMS is running on your system. Upgrade to VMS V5.1, then repeat the UISCNV V1.0 installation.

%UISCNV-E-NOBLOCKS, System disk does not contain enough free blocks.

Facility: UISCNV—UIS to DDIF Converter

Severity: Error

Explanation: Insufficient disk space is available to continue the installation. UISCNV V1.0 requires 1,000 free blocks to install. The installation procedure found fewer than 1,000 blocks and terminated. Ensure that there are at least 1,000 free blocks on your system disk and repeat the installation.

%UISCNV-E-NODECW, This kit requires DECwindows V5.1 to be installed first.

Facility: UISCNV—UIS to DDIF Converter

Severity: Error

Explanation: Your VAX system must be running DECwindows V5.1 to install the Converter. The installation procedure detected that DECwindows is not installed on your system. Refer to your *VMS Version 5.1 Installation Guide* for information on installing DECwindows.

2 Using the UIS to DDIF Converter

This chapter describes the UIS (User Interface Services) to DDIF converter. This software converts a UIS-encoded input file to an output file encoded in DDIF (Digital Document Interchange Format).

This chapter contains the following information:

- Section 2.1, Using the UIS to DDIF Converter, describes the commands used to invoke the UIS to DDIF Converter for a conversion involving a UIS input file.
- Section 2.2, Overview of UIS, provides a summary of the UIS format.
- Section 2.3, Data Mapping, describes the mapping between the data in a UIS document and the data that can be represented in a DDIF document.
- Section 3.1, Data Loss, discusses the data that is lost during the conversion of a UIS input file to its DDIF output file.
- Section A.1, Document Syntax Errors, discusses the errors that can be generated during a conversion involving the UIS front end.

2.1 Using the UIS to DDIF Converter

The UIS to DDIF converter reads your UIS-encoded files and converts them to an output file in DDIF format. This DDIF output file can then be used in any Digital product that interprets the DDIF format.

2.1.1 Converting a UIS Input File on VMS Systems

On VMS systems, you can use the CONVERT/DOCUMENT DCL command to invoke the conversion of a UIS-encoded input file to the DDIF format. This command has the following format:

```
$ CONVERT/DOCUMENT -
  input-file.UIS/FORMAT=UIS
  output-file/FORMAT=DDIF
```

In the above command line, the input file filename (input-file) and the output file filename (output-file) are different although they do not have to be. The encoding of the input file is specified as UIS by the /FORMAT=UIS qualifier. This means that during the conversion process, the CDA Converter Kernel invokes the UIS front end to perform the first phase of document conversion. Use the subsequent /FORMAT qualifier to specify your desired output file encoding for the file. If you do not specify this qualifier, the default is to create a DDIF-encoded version of the input document.

NOTE: The UIS front end does not support any processing options. However, if the back end for your desired output format does support processing

options, you can specify those in the options file. For more information on options files, see Chapter 1. The default file type for a VMS options file is .CDA$OPTIONS.

2.2 Overview of UIS

UIS (User Interface Services) defines a file format for the storage and retrieval of picture information. The file format consists of a set of elements that can be used to describe graphics objects, text, and images in a way that is compatible between different devices and applications.

Whenever a graphic object is drawn in the virtual display or an attribute is modified, an encoded entry of the object or attribute modification is added to a display list. Such entries enable any application to extract arbitrary output from a virtual display, give it to an intelligent application or store the data as a *generically encoded* file or buffer known as a *metafile*, then later reexecute the generically encoded binary stream into a new virtual display.

Generic encoding is both device independent and self describing.

When UIS routines are executed, a binary encoded packet of values is constructed and stored as display list entries. When the binary encoded packet is extracted from the display list, it becomes a generically encoded UIS metafile. Such metafiles can be reexecuted to invoke the appropriate internal generic encoding routines.

Although many UIS routines have corresponding generic encoding primitives, there is not necessarily a one-to-one mapping between UIS routines and generic encoding routines or between the UIS routine arguments and generic encoding routine arguments.

The UIS to DDIF converter includes the following features:

- Converts all standard UIS documents created by HCUIS$WRITE_DISPLAY (including SIGHT files).
- Produces DDIF documents that can be used with any Digital product that supports DDIF.

NOTE: **The converter does not support portability across VMS, ULTRIX, and OS/2 systems. Only the end result (.DDIF file) is supported across all the above operating systems.**

2.3 Data Mapping

This section describes how UIS primitives are mapped from the UIS input format to DDIF format.

Mapping is mainly one-to-one: each UIS primitive is converted to a DDIF record. This might not appear obvious because some applications do not yet handle specific DDIF items; thus, you might have perceived data loss.

3 Problems and Restrictions

This chapter details restrictions and problems discovered during the use of the UIS to DDIF converter. The VWS migration development group will inform you as soon as possible of any further problems and restrictions. Please submit QARs based on any other problems you encounter when using the UIS to DDIF converter.

3.1 Data Loss

NOTE: Be aware that some of the discrepancies you might encounter between your UIS-encoded input files and the corresponding DDIF-encoded output files can occur because of perceived rather than actual data loss. In other words, what is actually encoded in UIS is encoded in the DDIF output files, but the existing DECwindows applications do not yet handle the DDIF encoding. In such cases, the output from the .DDIF file appears different from that of the original .UIS output file.

3.1.1 Perceived Data Loss

Text Path

Text strings that appear on a path specified as left or down can actually appear right or up, respectively. This occurs because some existing CDA applications cannot interpret the left or down text path information.

Character Rotation

If you specify character rotation or text path up or down, characters actually appear with the baseline parallel to the text path. The information encoded in the .UIS file is translated and appears in the .DDIF file, but no other CDA application as yet supports this feature.

Varied Viewing Results

Existing CDA applications handle certain DDIF aggregates inconsistently. Under different applications, the same file can appear differently.

If you note such an inconsistency, please submit a SPR against the UIS to DDIF converter, including a copy of the .UIS file that was converted and identification of the applications under which the converted file was viewed (for example, the DDIF viewer, DECpaint, or PostScript).

3.1.2 Real Data Loss

Character Spacing and Character Slant (Shearing)

DDIF architecture does not support either of these features. Thus, they cannot implemented in the UIS to DDIF converter at this time.

3.1.3 Differences and Inconsistencies

Line Width

For the purposes of UIS, you can specify line width in world coordinates or in pixels. Pixels are device-dependent. However, DDIF requires line width values to be device-independent. Therefore, line width is based on a 77 dpi monitor. If your graphic object was created on a 100 dpi monitor, it now appears as a different size.

Unit of Measure

UIS uses centipoints as its standard unit of measure. A centipoint is defined as 1/7200 inch. This measurement information is passed to CDA, which overrides the default unit of measure of BMUs. (A BMU is equal to 1/1200 inch.)

3.1.4 User-Defined UIS Fonts

This release of the converter does not support user-defined UIS fonts. They will be addressed in a future release. If the converter encounters a user-defined font, it defaults to a 14-point Courier font, which is the same default that UIS uses.

3.1.5 Application Restrictions

The following applications were used to verify conversion consistency. Restrictions are listed for each application.

DDIF Viewer

The DDIF viewer improperly scales UIS files that are converted to DDIF. As a result, the contents of these files might or might not appear in the window.

DECpaint

DECpaint only supports the use of images. Any attempt to view non-images results in an error.

PostScript Previewer

Because of a problem in the PostScript converter, sloped text is improperly displayed if the slope falls between 90 and 270 degrees.

Depending on the version of the CDA converter library you have installed on your system, you might receive the following message:

```
% CDA-E-EMPTY, empty item.
```

To avoid this error, convert your UIS file to DDIF first, then convert your DDIF file to PostScript.

A Software and Error Messages

A.1 Messages Returned as a Result of the Conversion

The UIS to DDIF converter returns the following error message:

PROERROR, Programming Error—internal converter error—submit a QAR

Facility: UISCNV$, UIS to DDIF Converter

Explanation: An internal error was detected in the UIS to DDIF Converter.

User Action: Submit a QAR and supply a tape or floppy containing the UIS file you were attempting to convert.

A.2 Messages Returned as a Result of Errors Encountered During the Reading of a .UIS File

If you encounter one of the following error messages, try to reproduce the .UIS file or acquire a backup copy of the file.

NOTE: **All these messages indicate that a problem exists in the .UIS file. All these errors abort the conversion. If the .UIS file was created with HCUIS$WRITE_DISPLAY (including files created by SIGHT), submit a QAR. If the file was created with a user routine, check for a programming error.**

BAD_ATB, Illegal attempt to modify attribute block 0 (read-only).

Explanation: An attempt is made to modify an attribute in attribute block #0, which is defined to be read-only. Conversion aborts.

User Action: Check for a programming error.

BAD_COLOR_VALUE, Color value out of range.

Explanation: An attempt is made to specify one or more color values that are out of range.

User Action: Check for a programming error.

BAD_DISP, Display list has been corrupted.

Explanation: An illegal display list type code is encountered while the program traverses a display list.

User Action: Check the validity of the UIS metafile you are executing.

BAD_FONT, !AS is not a valid font.

Explanation: An attempt is made to reference an activated but invalid VWS font. The font is not placed in the specified attribute block.

User Action: Check for a programming error.

BAD_OPCODE, Unrecognized generic encoding item.

Explanation: The generic encoding interpreter detects an unknown item opcode. The rest of the generic encoding stream is skipped.

User Action: Check for a programming error.

BAD_VCM, Illegal virtual color map identifier.

Explanation: An illegal virtual color map index is given to a UIS routine as an argument. The color map index must be less than the VCM size.

User Action: Check for a programming error.

BAD_VCM_INDEX, Virtual color map index out of range.

Explanation: An illegal virtual color map index is given to a UIS routine as an argument.

User Action: Check for a programming error.

BAD_VCM_SIZE, Virtual color map size out of range or illegal.

Explanation: An illegal virtual color map size is given to a UIS routine as an argument, or the process references an existing shareable virtual color map that specifies a different size than that of the existing map.

User Action: Check for a programming error.

BAD_VER, Bad display list version number.

Explanation: An attempt is made to pass an unsupported version of the display list to UIS$EXECUTE.

User Action: Use a supported display list.

NODEFFONT, The default font, !AD, is not in the system font queue.

Explanation: An attempt is made to request a font in attribute block 0 that is not present in the system font queue.

User Action: Check SYS$SYSTEM:UISMEMFONTS.COM.

NO_END, Root segment not ended.

Explanation: An attempt is made to end the root segment.

User Action: Check for a programming error.

NO_FONT, The font cannot be found.

Explanation: An attempt is made to reference a font that cannot be satisfied, even by looking for other similar fonts. All references to the attribute block that specifies this font produce this error.

User Action: Specify font contained in the SYS$FONT directory.

UNSUP_FONT, Font !AS is an unsupported version.

Explanation: An attempt is made to request an activated but unsupported version of a font. The font is not placed in the specified attribute block.

User Action: Check for a programming error.

VCM_ACTIVE, Virtual color map is still active.

Explanation: An attempt is made to delete a virtual color map that is still referenced by one or more virtual displays.

User Action: Check for a programming error.

VCM_EXISTS, Virtual color map already accessed by process.

Explanation: An attempt is made to create a virtual color map that already exists.

User Action: Check for a programming error.

A.3 Error Messages Returned from Other Facilities

You can receive error messages from the following facilities as well:

- CDA
- RMS

Check documentation from those facilities for interpretation of their error messages.

B Output Files Produced By Running the IVP

This appendix shows the output files produced when you run the IVP. The following files are included:

ELLIPSES.UIS
MORE_ELLIPSES.UIS
THREECIRCLES.UIS
BOOK_GRAPH.UIS
BOOK_LINE_WIDTH.UIS
PATTERN.UIS
SIGHT2.UIS
SIGHT.UIS

These files are included on your kit in SYS$SYSROOT:[SYSHLP.EXAMPLES.UISCNV].

NOTE: The output in this appendix was produced using hardcopy UIS (HCUIS), rather than printing the .PS files produced by running the IVP. When you use UIS to DDIF to convert .UIS files that contain fill patterns, the results can appear different from the ones you obtain when you use HCUIS to RENDER the .UIS file. This is true because DDIF does not support writing modes and can produce an area where you see a combination of the fill patterns that cover that area. Therefore, some of the files in this appendix might not look exactly as they do when you run the IVP. To produce a more accurate rendition of the output, if you have both VWS and HCUIS installed, RENDER the .UIS file to your screen.

Figure B–1 Ellipses (ELLIPSES.UIS)

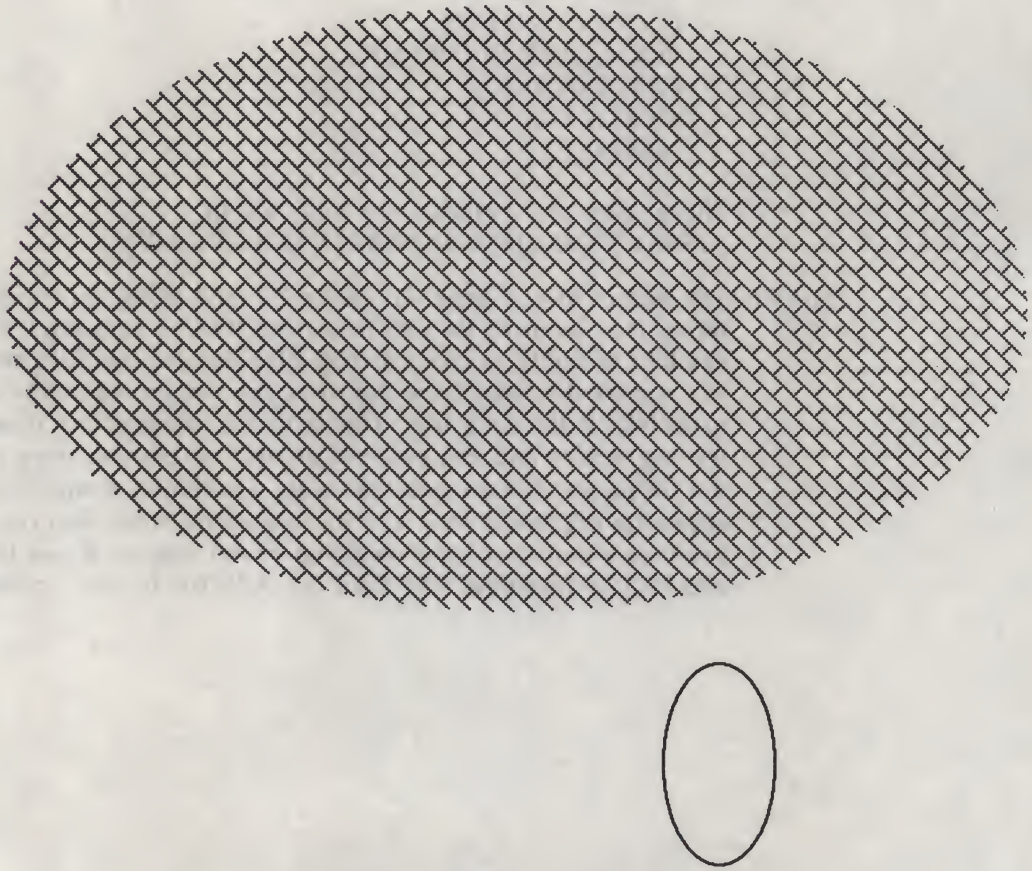


Figure B–2 More Ellipses (MORE_ELLIPSES.UIS)

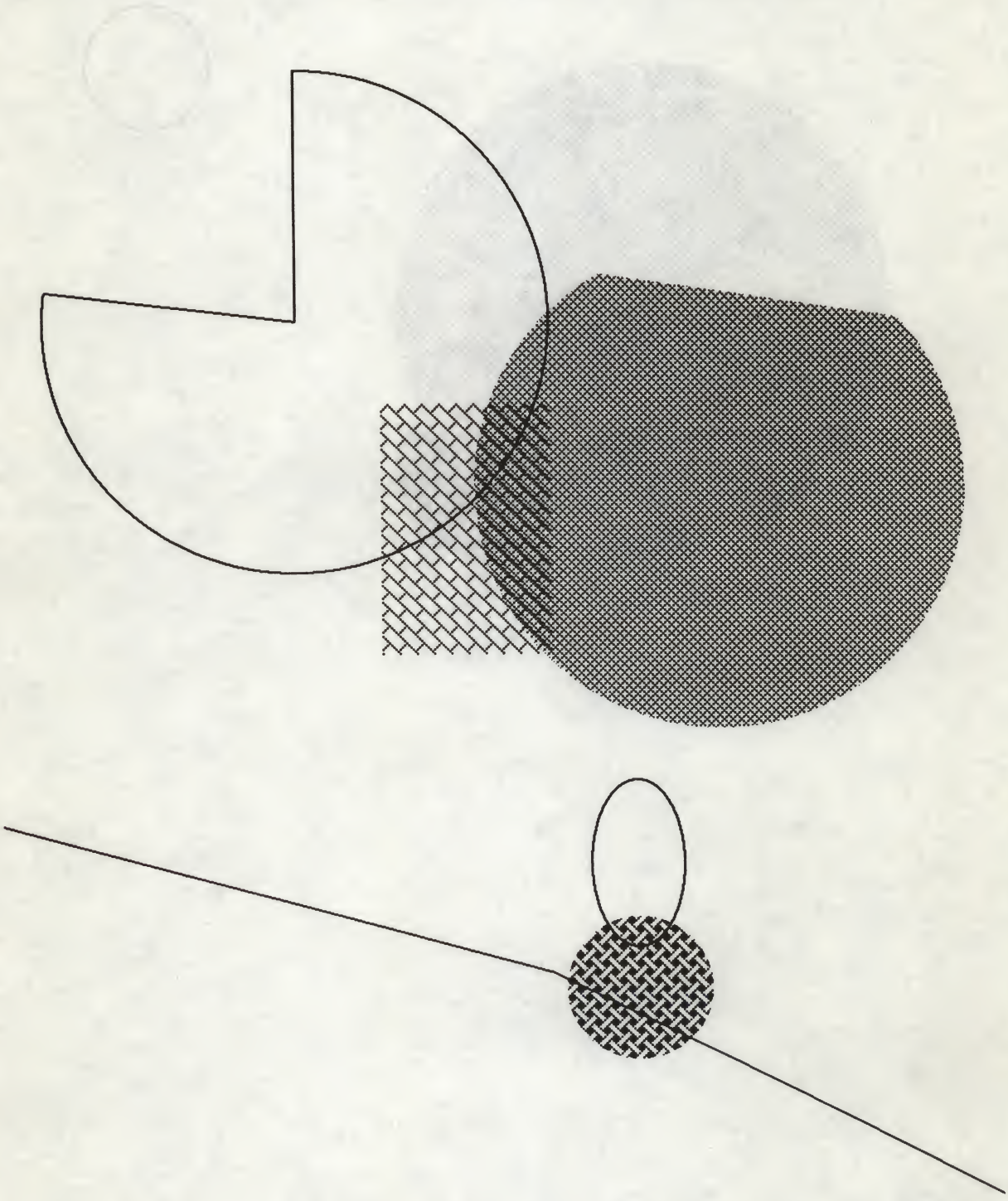


Figure B–3 Three Circles (THREECIRCLES.UIS)

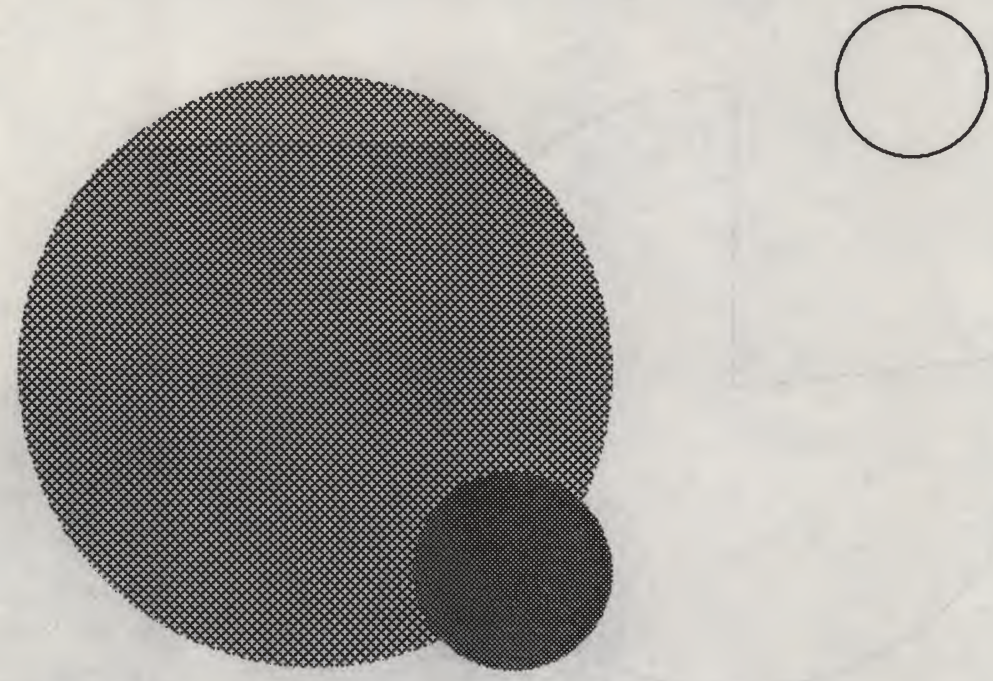


Figure B–4 Book Graph (BOOK_GRAPH.UIS)

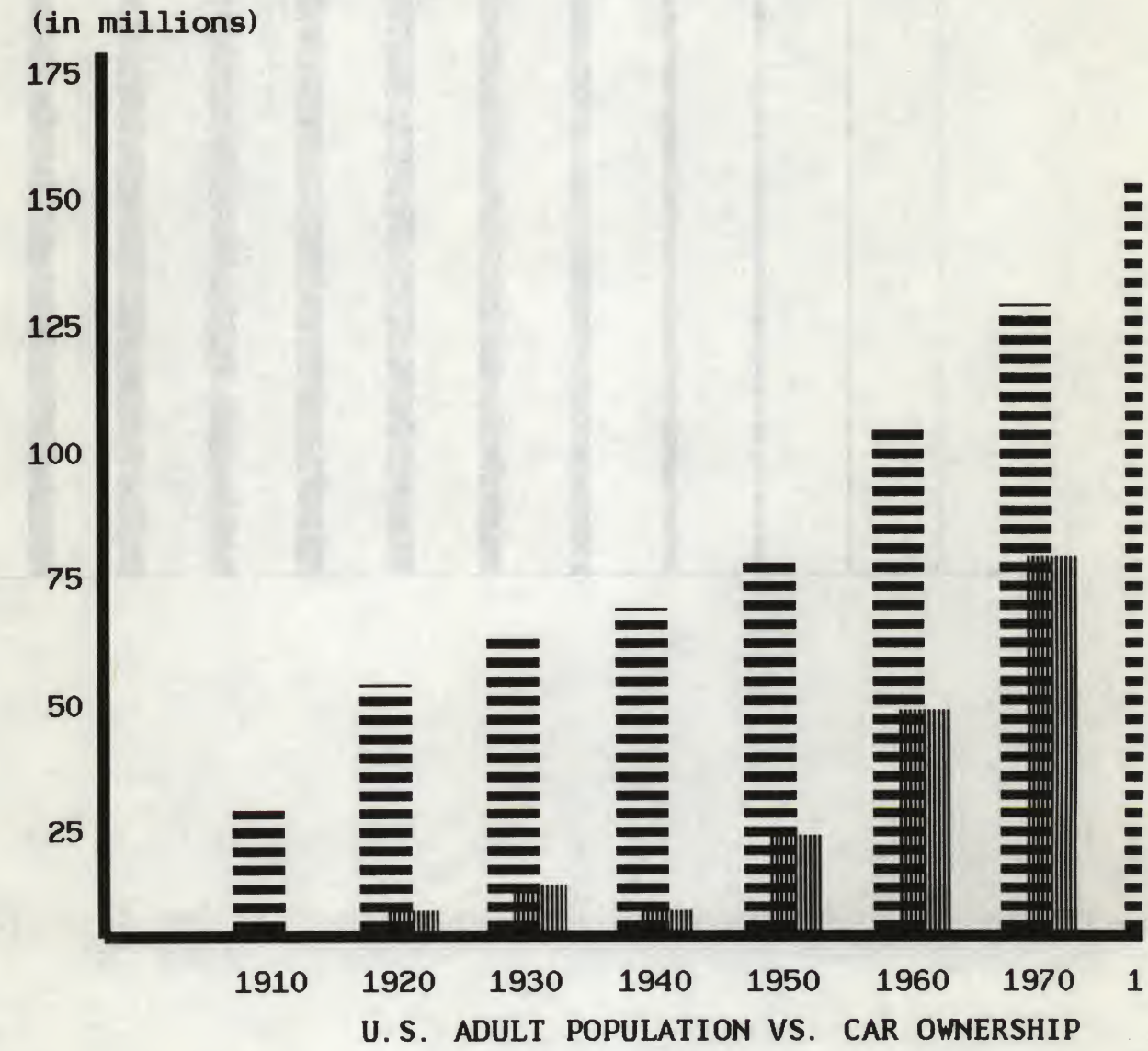


Figure B–5 Book Line Width (BOOK_LINE_WIDTH.UIS)

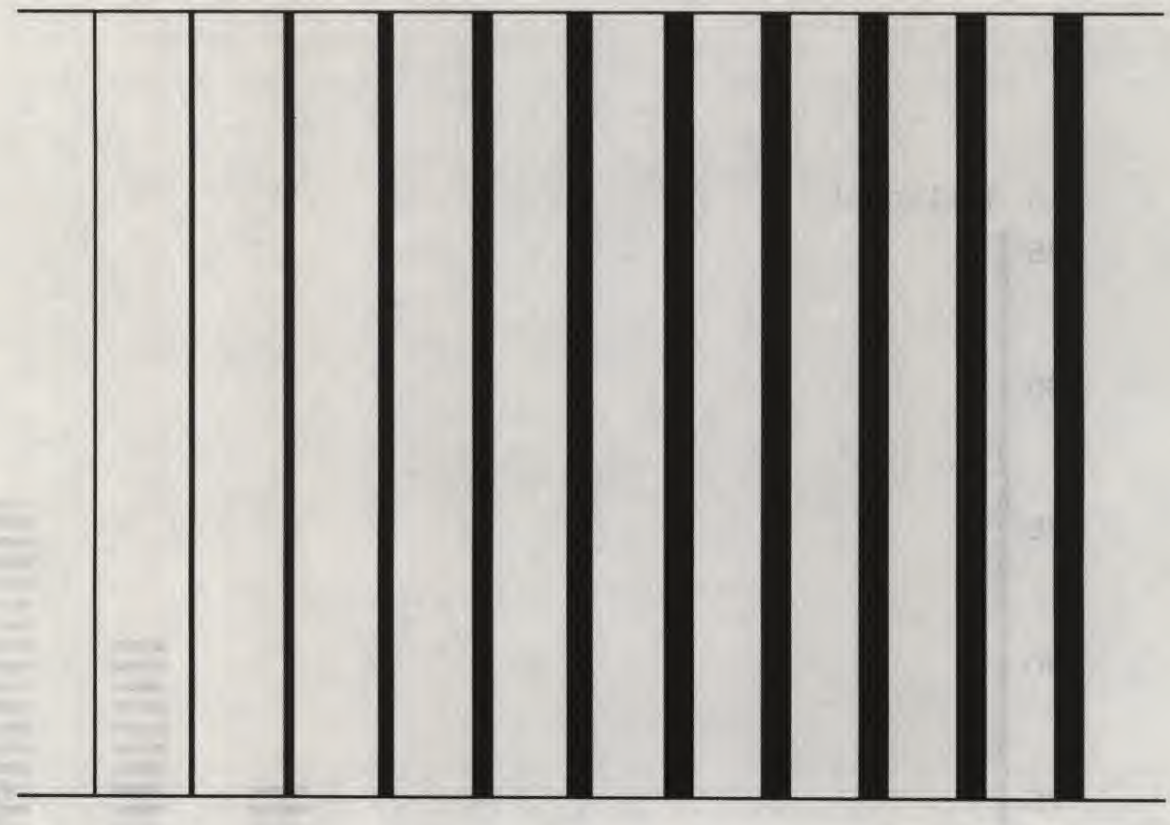


Figure B–6 Pattern (PATTERN.UIS)

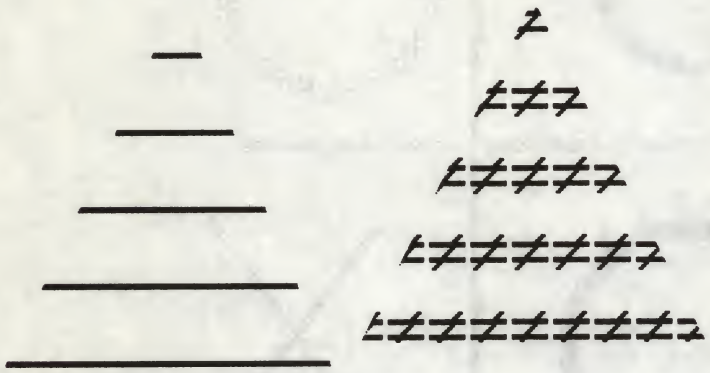


Figure B–7 SIGHT 2 (SIGHT2.UIS)

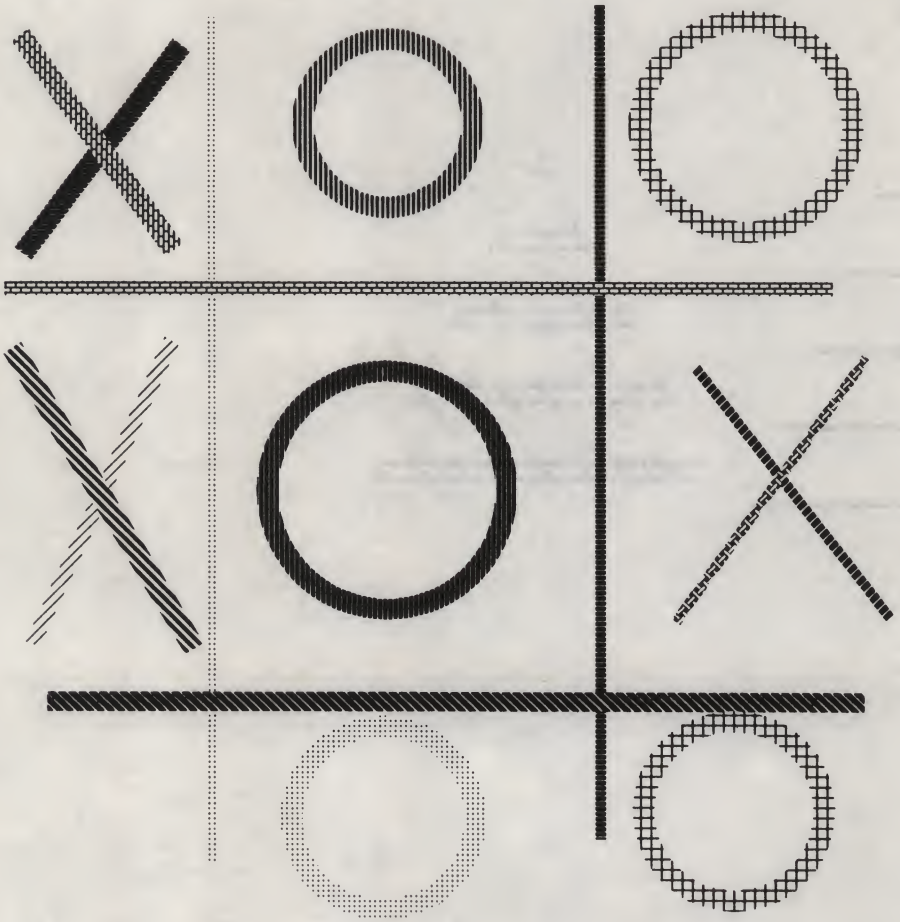
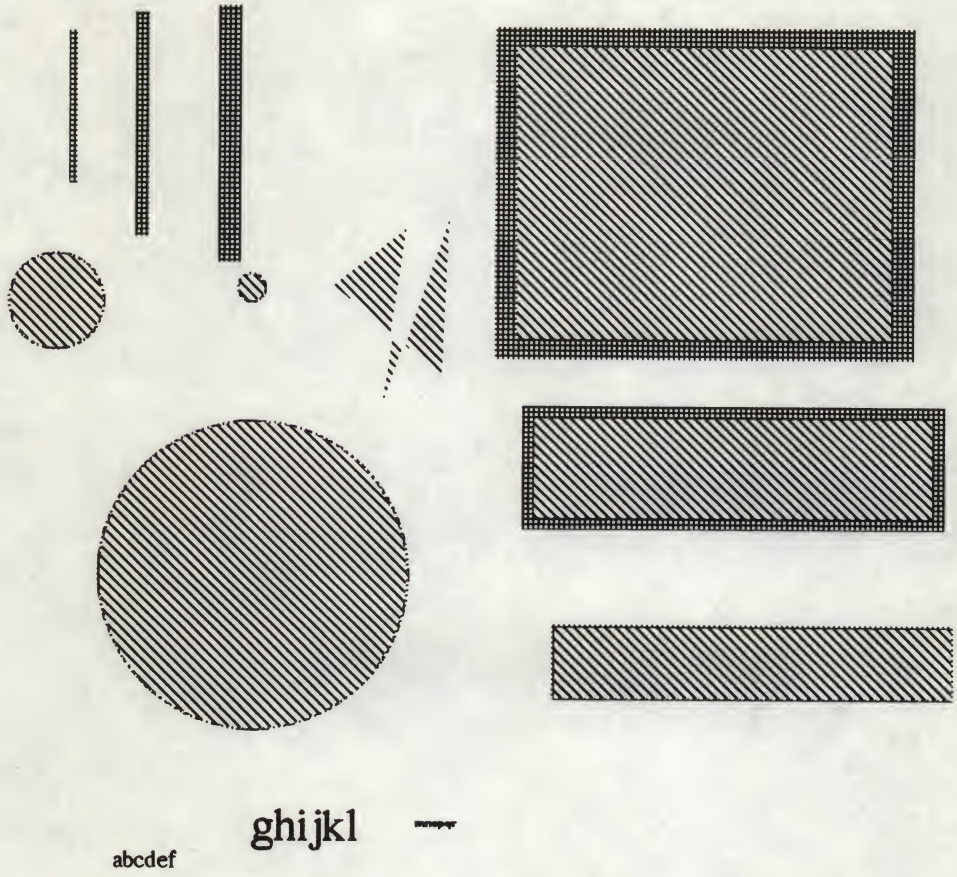


Figure B–8 SIGHT (SIGHT.UIS)



C Terminal Session—Installing the UIS to DDIF Converter

The following terminal session is the log of an installation of the UIS to DDIF Converter.

```
Username: SYSTEM
Password:
 Welcome to VAX/VMS version V5.1

$ set def sys$update
@vmsinstal

   VAX/VMS Software Product Installation Procedure V5.1


It is 1-JUN-1989 at 14:34.
Enter a question mark (?) at any time for help.

* Are you satisfied with the backup of your system disk [YES]?
* Where will the distribution volumes be mounted: mua0:

Enter the products to be processed from the first distribution volume set.
* Products: uiscnv
* Options:
Please mount the first volume of the set on  MUA0:.
* Are you ready? y
%MOUNT-I-MOUNTED, VWS042 mounted on _MUA0:
The following products will be processed:
  UISCNV V1.0

    Beginning installation of UISCNV V1.0 at 14:38

%VMSINSTAL-I-RESTORE, Restoring product saveset A ...
%VMSINSTAL-I-RELMOVED , The product's release notes have been
             successfully moved to SYS$HELP.


       Installing the UIS to DDIF Converter Software V1.0

        ************************************************

                      VAX UISCNV V1.0

                   UIS to DDIF Converter

                 Installation  Procedure

  Copyright © 1989, Digital Equipment Corporation

  ********************************************

           The UIS to DDIF Converter consists of an
           executable image, two message files,  an
           IVP, and several .UIS files.  The entire
           kit will  be  installed.  The .UIS files
           converted  using  the  IVP will serve as
           example files.


* Do you want to purge files replaced by this installation [YES]?
* Do you want to run the IVP after the installation [YES]?

    ***No more questions will be asked during the installation ***

%VMSINSTAL-I-RESTORE, Restoring product saveset B ...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
                     VMI$ROOT:[SYSHLP.EXAMPLES.UISCNV].
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...

        Starting the Installation Verification Procedure
```

```
        ********************************************
                        VAX UISCNV V1.0

                    UIS to DDIF Converter

                Installation Verification Procedure

        Copyright © 1989, Digital Equipment Corporation

        ********************************************

        The  UIS to DDIF Converter IVP converts several
        .UIS files  into .ANL and .PS files.  For more
        information on  this conversion and the  output
        produced,  refer  to  the  DCL CONVERT/DOCUMENT
        command.  You  will  be  notified  as each .UIS
        file has been successfully converted.

        If  the  IVP  fails,  a  message  displays  to
        indicate  the reason  for the failure.  See the
        "Installation Error Messages"  section  for  an
        explanation of this error message.


       BOOK_GRAPH.UIS has been successfully converted.

       BOOK_LINE_WIDTH.UIS has been successfully converted.

       PATTERN.UIS has been successfully converted.

       SIGHT1.UIS has been successfully converted.

       SIGHT2.UIS has been successfully converted.

       THREECIRCLES.UIS has been successfully converted.

       ELLIPSES.UIS has been successfully converted.

       MORE_ELLIPSES.UIS has been successfully converted.

       Installation of UISCNV V1.0 completed at 14:45

Enter the products to be processed from the next distribution volume set.
* Products: ^Z
     VMSINSTAL procedure done at 14:45
$ lo
    SYSTEM       logged out at  1-JUN-1989 14:45:59.38
```

Reader's Comments

This form is for document comments only. Digital will use comments submitted on this form at the company's discretion. If you require a written reply and are eligible to receive one under Software Performance Report (SPR) service, submit your comments on an SPR form.

Did you find this manual understandable, usable, and well organized? Please make suggestions for improvement.

Did you find errors in this manual? If so, specify the error and the page number.

Please indicate the type of user/reader that you most nearly represent:

- ☐ Assembly language programmer
- ☐ Higher-level language programmer
- ☐ Occasional programmer (experienced)
- ☐ User with little programming experience
- ☐ Student programmer
- ☐ Other (please specify)_____

Name_____ Date_____

Organization_____

Street_____

City_____ State_____ Zip Code_____
or Country

Do Not Tear - Fold Here and Tape

digital™

No Postage
Necessary
if Mailed in the
United States

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO 33 MAYNARD MASS

POSTAGE WILL BE PAID BY ADDRESSEE

VWS Engineering/Documentation
Digital Equipment Corporation
5 Wentworth Drive GFS/L20
Hudson, NH 03051-4929

Do Not Tear - Fold Here

digital